




UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,975	10/21/2003	Yoichi Tamaki	HITA.0445	4204
38327	7590	11/30/2005	EXAMINER	
REED SMITH LLP 3110 FAIRVIEW PARK DRIVE, SUITE 1400 FALLS CHURCH, VA 22042			DO, THUAN V	
			ART UNIT	PAPER NUMBER
			2825	

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/688,975	Applicant(s) TAMAKI ET AL. 	
	Examiner Thuan Do	Art Unit 2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 6662344.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/21/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is responsive to application filed on 10/21/2003. Claims 1-8 are pending in this office action.

Claim objections

Claim 1, the term "element isolation grooves reaching the isolation layer"; and

Claim 3, the terms "the plurality of the first bipolar transistors function as a singular bipolar transistor" including "the singular bipolar transistor"; and
are unclear to what applicants intend to mean. Clarification or correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being unpatentable over Uchida et al., Pat. No. 5214302.

Regarding claim 1: Uchida teaches a method comprising:

a silicon-on-insulator substrate including a base substrate, an insulating layer over the base substrate, and a semiconductor layer over the insulating layer (col. 1, lines 45-67 and figure 2);

electric circuit formed over the silicon-on-insulator substrate (Figure 2);

a plurality of semiconductor islands used as element-forming regions in a first area of the silicon-on-insulator substrate (Figure 2); and

a plurality of first bipolar transistors formed in the respective semiconductor islands, and having respective an emitter region, a base region, and a collector region formed in the semiconductor layer (col. 4, lines 46-67) ;

wherein the plurality of semiconductor islands are isolated each other by element isolation grooves reaching the isolation layer of the silicon-on-insulator substrate (col. 20, lines 1-22); and

the emitter regions, the base regions, and the collector regions of the plurality of the first bipolar transistors are electrically connected by interconnection wirings respectively (col. 19, line 45 through col. 20, line 22).

Regarding claim 2: Uchida teaches a method with island (col. 3, lines 3-10).

Regarding claim 3: Uchida teaches a method with connections (col. 1, lines 45-62).

The remaining claims of 102(b) section contain features similar to the rejection of claims 1-3 and rejected in the rationale.

3. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being unpatentable over Uchida et al., Pat. No. 4746963.

Regarding claim 1: Uchida teaches a method comprising:

a silicon-on-insulator substrate including a base substrate, an insulating layer over the base substrate, and a semiconductor layer over the insulating layer (col. 1, lines 26-50);

electric circuit formed over the silicon-on-insulator substrate (col. 1, lines 26-50);

a plurality of semiconductor islands used as element-forming regions in a first area of the silicon-on-insulator substrate (col. 1, lines 26-50); and

a plurality of first bipolar transistors formed in the respective semiconductor islands, and having respective an emitter region, a base region, and a collector region

Art Unit: 2825

formed in the semiconductor layer (col. 2, lines 52-67) ;

wherein the plurality of semiconductor islands are isolated each other by element isolation grooves reaching the isolation layer of the silicon-on-insulator substrate (col. 2, lines 52-67); and

the emitter regions, the base regions, and the collector regions of the plurality of the first bipolar transistors are electrically connected by interconnection wirings respectively (col. 1, lines 36-50).


The remaining claims of 102(b) section contain features similar to the rejection of claim 1 and rejected in the rationale.

CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan Do whose telephone number is 571-272-1891. The examiner can normally be reached on Monday-Friday 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on 571-272-1907. The fax phone numbers for proceeding this application is 571 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0596.



Thuan Do
Primary examiner
11/27/2005